

BCS 04-501-PCTSEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
SEQUENCE LISTING

<110> Bayer CropScience GmbH

<120> Methods for identifying proteins with starch phosphorylating enzymatic activity

<130> BCS 04-5001-PCT

<150> EP04090483.1

<151> 2004-12-15

<150> EP04090121.7

<151> 2004-03-29

<150> EP04090087.0

<151> 2004-03-05

<150> US60/549,980 provisional

<151> 2004-03-05

<160> 26

<170> PatentIn version 3.1

<210> 1

<211> 3591

<212> DNA

<213> *Arabidopsis thaliana*

<220>

<221> CDS

<222> (1)..(3591)

<223>

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260 265 270

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ctt ata ttc cgt gag ttg gag cac att tgc agt aag aaa gat gct act Leu Ile Phe Arg Glu Leu Glu His Ile Cys Ser Lys Lys Asp Ala Thr 325 330 335	1008
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ttc aaa gca gag ttt act gca gct gtc cct cta act cggtt att agg gac Phe Lys Ala Glu Phe Thr Ala Ala Val Pro Leu Thr Arg Ile Arg Asp 355 360 365	1104
ata gcc cat cgg aat gat att cct cat gat ctc aag caa gaa atc aag Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys 370 375 380	1152
cat acg ata caa aat aag ctt cac cggtt aat gct ggtt cca gaa gat cta His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu 385 390 395 400	1200
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530 535 540

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Ser	Trp	Asn	Asp	Pro	Leu	Asp	Ala	Leu	Val	Leu	Gly	Val	His	Gln	Val	
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Ala	Arg	Arg	Leu	Thr	Ala	Glu	Tyr	Ser	Asp	Leu	Leu	Leu	Gln	Ile	Phe	
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Gln	Ile	Ser	Lys	Leu	Cys	Thr	Val	Leu	Leu	Lys	Ala	Val	Arg	Asn	Ser	
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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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Val Cys His Trp Asp Ala Thr Arg Glu Thr Leu Asp Leu Pro Gln Glu  
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Val Gly Asn Asp Asp Asp Val Gly Asp Gly Gly His Glu Arg Asp Asn  
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Phe Met Arg Ser Asn Asp His Gly Asn Arg Glu Val Gly Arg Asn Trp  
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Phe Lys Ala Glu Phe Thr Ala Ala Val Pro Leu Thr Arg Ile Arg Asp  
 Seite 7

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
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Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gln Leu Glu Asp  
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Asp Gly Lys Thr Ile Trp Ala Met Arg Leu Lys Ala Thr Leu Asp Arg  
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Ala Arg Arg Leu Thr Ala Glu Tyr Ser Asp Leu Leu Leu Gln Ile Phe  
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675 680 685Leu Gly Ser Glu Gly Trp Asp Val Val Val Pro Gly Ser Thr Ser Gly  
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705 710 715 720Ser Gly Gly Pro Ile Ile Leu Leu Val Asn Lys Ala Asp Gly Asp Glu  
725 730 735Glu Val Ser Ala Ala Asn Gly Asn Ile Ala Gly Val Met Leu Leu Gln  
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His Ser Glu His Gly Val Pro Ala Ser Phe Lys Val Pro Thr Gly Val

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945 950 955 960Lys Thr Leu Gln Val Pro Lys Glu Thr Ile Asn Ser Ile Ser Lys Ala  
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BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
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 Gly Gly Arg Pro Arg Arg Gly Leu Val Leu Pro Pro Pro Gly Val Gly  
 15 20 25

g<sup>g</sup>c ggt gt<sup>g</sup> ctg ctc cgc cc<sup>g</sup> gga g<sup>g</sup>c atg g<sup>g</sup>c ctc cct ggg cc<sup>g</sup> cgc 147  
 Ala Gly Val Leu Leu Arg Arg Gly Ala Met Ala Leu Pro Gly Arg Arg  
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 130 135 140

BCS 04-501-PCT_SEQUENZPROTOKOLL_Verfahren zur Identifizierung ST25																																																			
aaa	ata	tgg	gaa	gat	ggt	aat	aac	cgt	gtt	gag	ctg	ccg	aag	gat																			483																		
Lys	Ile	Trp	Glu	Asp	Gly	Asn	Asn	Arg	Val	Val	Gl	Leu	Pro	Lys	Asp																			145																	
																150																		155																	
ggt	aag	ttt	gat	ata	gta	tgc	cac	tgg	aat	aga	aca	gaa	gag	cca	tta																			531																	
Gly	Lys	Phe	Asp	Ile	Val	Cys	His	Trp	Asn	Arg	Thr	Gl	Gl	Pro	Leu																			160																	
																165																			170																
gaa	ctt	tta	gga	aca	cca	aag	ttt	gag	ttg	gtc	gga	gaa	gct	gaa	aag																			579																	
Gl	Leu	Leu	Gly	Thr	Pro	Lys	Phe	Gl	Leu	Val	Gl	Gl	Ala	Gl	Lys																			175																	
																180																			185																
aat	act	ggc	gag	gat	gct	tca	gca	tct	gta	act	ttt	gca	cct	gaa	aaa																			627																	
Asn	Thr	Gly	Glu	Asp	Ala	Ser	Ala	Ser	Val	Thr	Phe	Ala	Pro	Glu	Lys																			190																	
																195																			200																
gtt	caa	gat	att	tca	gtt	gtt	gag	aat	ggt	gat	cca	gca	cca	gag	gcc																			675																	
Val	Gln	Asp	Ile	Ser	Val	Val	Gl	Asn	Gl	Asp	Pro	Ala	Pro	Gl	Ala																			210																	
																215																			220																
gag	tca	agc	aaa	ttt	ggt	ggg	caa	tgg	caa	gga	agt	aaa	act	gtt	ttc																			723																	
Gl	Ser	Ser	Lys	Phe	Gly	Gly	Gl	Trp	Gl	Gly	Ser	Lys	Thr	Val	Phe																			225																	
																230																			235																
atg	aga	tca	aat	gag	cat	ctg	aat	aag	gag	gct	gat	agg	atg	tgg	gat																			771																	
Met	Arg	Ser	Asn	Glu	His	Leu	Asn	Lys	Gl	Ala	Asp	Arg	Met	Trp	Asp																			240																	
																245																			250																
aca	act	ggg	ctt	gat	gga	ata	gca	ctg	aaa	ctg	gtg	gag	ggc	gat	aaa																			819																	
Thr	Thr	Gly	Leu	Asp	Gly	Ile	Ala	Leu	Lys	Leu	Val	Gl	Gly	Asp	Lys																			255																	
																260																			265																
gca	tcc	agg	aac	tgg	tgg	cgg	aag	tta	gag	gtt	gtt	cgc	ggg	ata	ttg																			867																	
Ala	Ser	Arg	Asn	Trp	Trp	Arg	Lys	Leu	Glu	Val	Val	Arg	Gly	Ile	Leu																			270																	
																275																			280																
tca	gaa	tct	ttt	gat	gac	cag	agt	cgt	ctg	ggg	gcc	ctt	gta	tac	tca																			915																	
Ser	Glu	Ser	Phe	Asp	Asp	Gln	Ser	Arg	Leu	Gly	Ala																																								

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gct aca gaa gtc atg ctt gct agg att act aag acc cct gga gaa tac	1299
Ala Thr Glu Val Met Leu Ala Arg Ile Thr Lys Thr Pro Gly Glu Tyr	
415 420 425	
agt gaa aca ttt gtt gaa caa ttc acg ata ttt tat agc gaa cta aaa	1347
Ser Glu Thr Phe Val Glu Gln Phe Thr Ile Phe Tyr Ser Glu Leu Lys	
430 435 440 445	
gat ttc ttc aat gct ggc agc cta ttt gag caa ctg gag tcc atc aag	1395
Asp Phe Phe Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys	
450 455 460	
gaa tct ctg aac gag tca ggc tta gaa gtt ctc tca tcc ttt gtg gaa	1443
Glu Ser Leu Asn Glu Ser Gly Leu Glu Val Leu Ser Ser Phe Val Glu	
465 470 475	
acc aaa agg agt ttg gac caa gtg gat cat gca gaa gat ttg gat aaa	1491
Thr Lys Arg Ser Leu Asp Gln Val Asp His Ala Glu Asp Leu Asp Lys	
480 485 490	
aat gat acc att caa att ttg atg act acc ttg caa tca tta tct tct	1539
Asn Asp Thr Ile Gln Ile Leu Met Thr Thr Leu Gln Ser Leu Ser Ser	
495 500 505	
cta aga tcg gtt cta atg aag ggc ctt gaa agt ggc ctt aga aat gat	1587
Leu Arg Ser Val Leu Met Lys Gly Leu Glu Ser Gly Leu Arg Asn Asp	
510 515 520 525	
gcg cct gat aat gct ata gca atg cga caa aag tgg cgc ctt tgt gaa	1635
Ala Pro Asp Asn Ala Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu	
530 535 540	
att agt ctt gag gat tat tca ttt gtt ctg tta agc aga ttc atc aat	1683
Ile Ser Leu Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Phe Ile Asn	
545 550 555	
act ctt gaa gcc tta ggt gga tca gct tca ctt gca aag gat gta gct	1731
Thr Leu Glu Ala Leu Gly Gly Ser Ala Ser Leu Ala Lys Asp Val Ala	
560 565 570	
aga aat act act cta tgg gat act act ctt gat gcc ctt gtc att ggc	1779
Arg Asn Thr Thr Leu Trp Asp Thr Thr Leu Asp Ala Leu Val Ile Gly	
575 580 585	
atc aat caa gtt agc ttt tca ggt tgg aaa aca gat gaa tgt att gcc	1827
Ile Asn Gln Val Ser Phe Ser Gly Trp Lys Thr Asp Glu Cys Ile Ala	
590 595 600 605	
ata ggg aat gag att ctt tcc tgg aag caa aaa ggt cta tct gaa agt	1875
Ile Gly Asn Glu Ile Leu Ser Trp Lys Gln Lys Gly Leu Ser Glu Ser	
610 615 620	
gaa ggt tgt gaa gat ggg aaa tat att tgg tca cta aga ctt aaa gct	1923
Glu Gly Cys Glu Asp Gly Lys Tyr Ile Trp Ser Leu Arg Leu Lys Ala	
625 630 635	
aca ctg gac aga gca cgg aga tta acg gaa gag tac tct gaa gca ctt	1971
Thr Leu Asp Arg Ala Arg Arg Leu Thr Glu Glu Tyr Ser Glu Ala Leu	
640 645 650 655	
ctt tct ata ttc cct gaa aaa gta atg gtt att ggg aaa gcc ctt gga	2019
Leu Ser Ile Phe Pro Glu Lys Val Met Val Ile Gly Lys Ala Leu Gly	
655 660 665	
ata cca gat aac agt gtg aga act tac aca gag gca gaa att cgt gct	2067
Ile Pro Asp Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile Arg Ala	
670 675 680 685	

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ggc	att	gtt	ttt	cag	gta	tct	aaa	cta	tgc	aca	gta	ctt	cag	aaa	gca	2115
Gly	Ile	Val	Phe	Gln	Val	Ser	Lys	Leu	Cys	Thr	Val	Leu	Gln	Lys	Ala	
690								695					700			
att	cga	gaa	gta	ctt	gga	tca	act	ggc	tgg	gat	gtt	ctt	gtt	cct	gga	2163
Ile	Arg	Glu	Val	Leu	Gly	Ser	Thr	Gly	Trp	Asp	Val	Leu	Val	Pro	Gly	
705								710					715			
gtg	gcc	cat	gga	act	ctg	atg	cgg	gtg	gaa	aga	att	ctt	cct	gga	tca	2211
Val	Ala	His	Gly	Thr	Leu	Met	Arg	Val	Glu	Arg	Ile	Leu	Pro	Gly	Ser	
720							725				730					
tta	cct	tca	tct	gtc	aaa	gaa	cct	gtg	gtt	cta	att	gta	gat	aag	gct	2259
Leu	Pro	Ser	Ser	Val	Lys	Glu	Pro	Val	Val	Leu	Ile	Val	Asp	Lys	Ala	
735						740				745						
gat	gga	gat	gaa	gag	gtc	aaa	gct	gct	ggg	gat	aat	ata	gtt	ggt	gtt	2307
Asp	Gly	Asp	Glu	Glu	Val	Lys	Ala	Ala	Gly	Asp	Asn	Ile	Val	Gly	Val	
750						755				760				765		
att	ctt	ctt	cag	gaa	cta	cct	cac	ctt	tca	cat	ctt	gtt	gtt	aga	gct	2355
Ile	Leu	Leu	Gln	Glu	Leu	Pro	His	Leu	Ser	His	Leu	Gly	Val	Arg	Ala	
770								775					780			
cgt	caa	gag	aat	gtt	gta	ttt	gta	act	tgt	gaa	tat	gat	gac	aca	gtt	2403
Arg	Gln	Glu	Asn	Val	Val	Phe	Val	Thr	Cys	Glu	Tyr	Asp	Asp	Thr	Val	
785								790					795			
aca	gat	gtg	tat	ttg	ctt	gag	gga	aaa	tat	atc	aga	tta	gaa	gca	tca	2451
Thr	Asp	Val	Tyr	Leu	Leu	Glu	Gly	Lys	Tyr	Ile	Arg	Leu	Glu	Ala	Ser	
800						805						810				
tcc	atc	aat	gtc	aat	ctc	tca	ata	gtt	tca	gaa	aaa	aat	gac	aat	gct	2499
Ser	Ile	Asn	Val	Asn	Leu	Ser	Ile	Val	Ser	Glu	Lys	Asn	Asp	Asn	Ala	
815						820				825						
gtc	tct	aca	gaa	cca	aat	agt	aca	ggg	aat	cca	ttt	caa	cag	aaa	ctc	2547
Val	Ser	Thr	Glu	Pro	Asn	Ser	Thr	Gly	Asn	Pro	Phe	Gln	Gln	Lys	Leu	
830						835				840			845			
caa	aat	gaa	tcc	tct	cta	cca	tcg	gat	atc	gag	atg	ccs	ctg	caa	atg	2595
Gln	Asn	Glu	Phe	Ser	Leu	Pro	Ser	Asp	Ile	Glu	Met	Pro	Leu	Gln	Met	
850								855					860			
tct	aag	caa	aaa	agc	aaa	tca	gga	gtg	aat	ggt	agt	ttt	gct	gct	ctt	2643
Ser	Lys	Gln	Lys	Ser	Lys	Ser	Gly	Val	Asn	Gly	Ser	Phe	Ala	Ala	Leu	
865								870					875			
gag	ctt	tca	gaa	gct	tca	gtg	gaa	tca	gct	ggt	gca	aaa	gct	gct	gca	2691
Glu	Leu	Ser	Glu	Ala	Ser	Val	Glu	Ser	Ala	Gly	Ala	Lys	Ala	Ala	Ala	
880						885						890				
tgc	aga	act	ctt	tct	gtt	ctt	gct	tca	ttg	tct	aat	aaa	gtc	tat	agt	2739
Cys	Arg	Thr	Leu	Ser	Val	Leu	Ala	Ser	Leu	Ser	Asn	Lys	Val	Tyr	Ser	
895						900				905						
gat	caa	gga	gtt	cca	gca	gcc	ttt	aga	gtc	cct	tct	ggt	gct	gtg	ata	2787
Asp	Gln	Gly	Val	Pro	Ala	Ala	Phe	Arg	Val	Pro	Ser	Gly	Ala	Val	Ile	
910						915				920			925			
cca	ttt	gga	tca	atg	gag	gat	gcg	ctc	aag	aaa	agt	gga	tca	ctg	gaa	2835
Pro	Phe	Gly	Ser	Met	Glu	Asp	Ala	Leu	Lys	Lys	Ser	Gly	Ser	Leu	Glu	
930								935					940			
tcc	ttt	aca	agc	ctt	cta	gaa	aag	att	gaa	aca	gcc	aaa	gtc	gaa	aat	2883
Ser	Phe	Thr	Ser	Leu	Leu	Glu	Lys	Ile	Glu	Thr	Ala	Lys	Val	Glu	Asn	
945						950						955				

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ggt gaa gtt gat agc ctg gcg ttg gag cta caa gca ata att tca cat	2931
Gly Glu Val Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His	
960 965 970	
ctt tcc cca ccg gag gag act att ata ttt ctc aaa aga atc ttc cca	2979
Leu Ser Pro Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro	
975 980 985	
cag gat gtc cggtt gtt aga tct agt gct aat gtg gag gag ttt	3027
Gln Asp Val Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu Asp Leu	
990 995 1000 1005	
gct ggt atg tca gct gct ggt ctc tat gat tca att ccc aat gtc	3072
Ala Gly Met Ser Ala Ala Gly Leu Tyr Asp Ser Ile Pro Asn Val	
1010 1015 1020	
agt ctc atg gac cca tgt gcc ttt gga gct gcg gtt ggg aag gtt	3117
Ser Leu Met Asp Pro Cys Ala Phe Gly Ala Ala Val Gly Lys Val	
1025 1030 1035	
tgg gct tct tta tac aca agg aga gcc atc cta agc cgt cga gcc	3162
Trp Ala Ser Leu Tyr Thr Arg Arg Ala Ile Leu Ser Arg Arg Ala	
1040 1045 1050	
gct ggt gtt tat cag aga gac gcg aca atg gct gtt ctt gtc caa	3207
Ala Gly Val Tyr Gln Arg Asp Ala Thr Met Ala Val Leu Val Gln	
1055 1060 1065	
gaa ata ctg cag cca gat ctc tcc ttc gtg ctt cat act gtt tgc	3252
Glu Ile Leu Gln Pro Asp Leu Ser Phe Val Leu His Thr Val Cys	
1070 1075 1080	
ccc gct gac cat gac ccc aag gtt gtc cag gct gag gtc gcc cct	3297
Pro Ala Asp His Asp Pro Lys Val Val Gln Ala Glu Val Ala Pro	
1085 1090 1095	
ggg ctg ggt gaa acg ctt gct tca gga acc cgt ggc acc ccg tgg	3342
Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro Trp	
1100 1105 1110	
agg ctg tca tgt aac aaa ttc gat gga aaa gtt gcc act ctt gcc	3387
Arg Leu Ser Cys Asn Lys Phe Asp Gly Lys Val Ala Thr Leu Ala	
1115 1120 1125	
ttt tca aat ttc agt gag gag atg gtg gtg cac aac tct ggt cct	3432
Phe Ser Asn Phe Ser Glu Glu Met Val Val His Asn Ser Gly Pro	
1130 1135 1140	
gcc aat gga gaa gta att cgt ctt act gtt gat tac agc aag aag	3477
Ala Asn Gly Glu Val Ile Arg Leu Thr Val Asp Tyr Ser Lys Lys	
1145 1150 1155	
cca ttg tcg gtt gat aca acc ttt agg aag cag ttt ggt cag cga	3522
Pro Leu Ser Val Asp Thr Thr Phe Arg Lys Gln Phe Gly Gln Arg	
1160 1165 1170	
ctg gct gcg att ggc cag tat ctg gag cag aag ttc ggg agt gca	3567
Leu Ala Ala Ile Gly Gln Tyr Leu Glu Gln Lys Phe Gly Ser Ala	
1175 1180 1185	
cag gat gtg gaa ggt tgc ctg gtt ggg aaa gat att ttt ata gtg	3612
Gln Asp Val Glu Gly Cys Leu Val Gly Lys 1195 Asp Ile Phe Ile Val	
1190 1200	
caa agc agg cca cag cca tag aagccgaatt c	3644
Gln Ser Arg Pro Gln Pro	
1205	

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&lt;210&gt; 4

&lt;211&gt; 1206

&lt;212&gt; PRT

&lt;213&gt; Oryza sativa

&lt;400&gt; 4

Met	Thr	Ser	Leu	Arg	Pro	Leu	Glu	Thr	Ser	Leu	Ser	Ile	Gly	Gly	Arg
1				5					10						15

Pro	Arg	Arg	Gly	Leu	Val	Leu	Pro	Pro	Pro	Gly	Val	Gly	Ala	Gly	Val
					20			25							30

Leu	Leu	Arg	Arg	Gly	Ala	Met	Ala	Leu	Pro	Gly	Arg	Arg	Gly	Phe	Ala
					35		40				45				

Cys	Arg	Gly	Arg	Ser	Ala	Ala	Ser	Ala	Ala	Glu	Arg	Thr	Lys	Glu	Lys
					50		55				60				

Lys	Arg	Arg	Asp	Ser	Ser	Lys	Gln	Pro	Leu	Val	His	Leu	Gln	Val	Cys
					65		70			75					80

Leu	Glu	His	Gln	Val	Lys	Phe	Gly	Glu	His	Val	Gly	Ile	Ile	Gly	Ser
					85			90				95			

Thr	Lys	Glu	Leu	Gly	Ser	Trp	Glu	Glu	Gln	Val	Glu	Leu	Glu	Trp	Thr
					100			105							110

Thr	Asn	Gly	Trp	Val	Cys	Gln	Leu	Lys	Leu	Pro	Gly	Glu	Thr	Leu	Val
					115		120				125				

Glu	Phe	Lys	Phe	Val	Ile	Phe	Leu	Val	Gly	Gly	Lys	Asp	Lys	Ile	Trp
					130		135				140				

Glu	Asp	Gly	Asn	Asn	Arg	Val	Val	Glu	Leu	Pro	Lys	Asp	Gly	Lys	Phe
					145		150			155					160

Asp	Ile	Val	Cys	His	Trp	Asn	Arg	Thr	Glu	Glu	Pro	Leu	Glu	Leu	Leu
					165			170				175			

Gly	Thr	Pro	Lys	Phe	Glu	Leu	Val	Gly	Glu	Ala	Glu	Lys	Asn	Thr	Gly
					180		185				190				

Glu	Asp	Ala	Ser	Ala	Ser	Val	Thr	Phe	Ala	Pro	Glu	Lys	Val	Gln	Asp
					195		200				205				

Ile	Ser	Val	Val	Glu	Asn	Gly	Asp	Pro	Ala	Pro	Glu	Ala	Glu	Ser	Ser
					210		215			220					

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Lys Phe Gly Gly Gln Trp Gln Gly Ser Lys Thr Val Phe Met Arg Ser  
225 230 235 240

Asn Glu His Leu Asn Lys Glu Ala Asp Arg Met Trp Asp Thr Thr Gly  
245 250 255

Leu Asp Gly Ile Ala Leu Lys Leu Val Glu Gly Asp Lys Ala Ser Arg  
260 265 270

Asn Trp Trp Arg Lys Leu Glu Val Val Arg Gly Ile Leu Ser Glu Ser  
275 280 285

Phe Asp Asp Gln Ser Arg Leu Gly Ala Leu Val Tyr Ser Ala Ile Tyr  
290 295 300

Leu Lys Trp Ile Tyr Thr Gly Gln Ile Ser Cys Phe Glu Asp Gly Gly  
305 310 315 320

His His Arg Pro Asn Lys His Ala Glu Ile Ser Arg Gln Ile Phe Arg  
325 330 335

Glu Leu Glu Met Met Tyr Tyr Gly Lys Thr Thr Ser Ala Lys Asp Val  
340 345 350

Leu Val Ile Arg Lys Ile His Pro Phe Leu Pro Ser Phe Lys Ser Glu  
355 360 365

Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg Asp Ile Ala His Arg  
370 375 380

Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys His Thr Ile Gln  
385 390 395 400

Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu Ile Ala Thr Glu  
405 410 415

Val Met Leu Ala Arg Ile Thr Lys Thr Pro Gly Glu Tyr Ser Glu Thr  
420 425 430

Phe Val Glu Gln Phe Thr Ile Phe Tyr Ser Glu Leu Lys Asp Phe Phe  
435 440 445

Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys Glu Ser Leu  
450 455 460

Asn Glu Ser Gly Leu Glu Val Leu Ser Ser Phe Val Glu Thr Lys Arg  
465 470 475 480

Ser Leu Asp Gln Val Asp His Ala Glu Asp Leu Asp Lys Asn Asp Thr  
485 490 495

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Ile Gln Ile Leu Met Thr Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser  
 500 505 510

Val Leu Met Lys Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Pro Asp  
 515 520 525

Asn Ala Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Ser Leu  
 530 535 540

Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Phe Ile Asn Thr Leu Glu  
 545 550 555 560

Ala Leu Gly Gly Ser Ala Ser Leu Ala Lys Asp Val Ala Arg Asn Thr  
 565 570 575

Thr Leu Trp Asp Thr Thr Leu Asp Ala Leu Val Ile Gly Ile Asn Gln  
 580 585 590

Val Ser Phe Ser Gly Trp Lys Thr Asp Glu Cys Ile Ala Ile Gly Asn  
 595 600 605

Glu Ile Leu Ser Trp Lys Gln Lys Gly Leu Ser Glu Ser Glu Gly Cys  
 610 615 620

Glu Asp Gly Lys Tyr Ile Trp Ser Leu Arg Leu Lys Ala Thr Leu Asp  
 625 630 635 640

Arg Ala Arg Arg Leu Thr Glu Glu Tyr Ser Glu Ala Leu Leu Ser Ile  
 645 650 655

Phe Pro Glu Lys Val Met Val Ile Gly Lys Ala Leu Gly Ile Pro Asp  
 660 665 670

Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile Arg Ala Gly Ile Val  
 675 680 685

Phe Gln Val Ser Lys Leu Cys Thr Val Leu Gln Lys Ala Ile Arg Glu  
 690 695 700

Val Leu Gly Ser Thr Gly Trp Asp Val Leu Val Pro Gly Val Ala His  
 705 710 715 720

Gly Thr Leu Met Arg Val Glu Arg Ile Leu Pro Gly Ser Leu Pro Ser  
 725 730 735

Ser Val Lys Glu Pro Val Val Leu Ile Val Asp Lys Ala Asp Gly Asp  
 740 745 750

Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val Gly Val Ile Leu Leu  
 755 760 765

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Gln Glu Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg Gln Glu  
 770 775 780

Asn Val Val Phe Val Thr Cys Glu Tyr Asp Asp Thr Val Thr Asp Val  
 785 790 795 800

Tyr Leu Leu Glu Gly Lys Tyr Ile Arg Leu Glu Ala Ser Ser Ile Asn  
 805 810 815

Val Asn Leu Ser Ile Val Ser Glu Lys Asn Asp Asn Ala Val Ser Thr  
 820 825 830

Glu Pro Asn Ser Thr Gly Asn Pro Phe Gln Gln Lys Leu Gln Asn Glu  
 835 840 845

Phe Ser Leu Pro Ser Asp Ile Glu Met Pro Leu Gln Met Ser Lys Gln  
 850 855 860

Lys Ser Lys Ser Gly Val Asn Gly Ser Phe Ala Ala Leu Glu Leu Ser  
 865 870 875 880

Glu Ala Ser Val Glu Ser Ala Gly Ala Lys Ala Ala Ala Cys Arg Thr  
 885 890 895

Leu Ser Val Leu Ala Ser Leu Ser Asn Lys Val Tyr Ser Asp Gln Gly  
 900 905 910

Val Pro Ala Ala Phe Arg Val Pro Ser Gly Ala Val Ile Pro Phe Gly  
 915 920 925

Ser Met Glu Asp Ala Leu Lys Lys Ser Gly Ser Leu Glu Ser Phe Thr  
 930 935 940

Ser Leu Leu Glu Lys Ile Glu Thr Ala Lys Val Glu Asn Gly Glu Val  
 945 950 955 960

Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His Leu Ser Pro  
 965 970 975

Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro Gln Asp Val  
 980 985 990

Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu Asp Leu Ala Gly Met  
 995 1000 1005

Ser Ala Ala Gly Leu Tyr Asp Ser Ile Pro Asn Val Ser Leu Met  
 1010 1015 1020

Asp Pro Cys Ala Phe Gly Ala Ala Val Gly Lys Val Trp Ala Ser  
 1025 1030 1035

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Leu Tyr Thr Arg Arg Ala Ile Leu Ser Arg Arg Ala Ala Gly Val  
1040 1045 1050

Tyr Gln Arg Asp Ala Thr Met Ala Val Leu Val Gln Glu Ile Leu  
1055 1060 1065

Gln Pro Asp Leu Ser Phe Val Leu His Thr Val Cys Pro Ala Asp  
1070 1075 1080

His Asp Pro Lys Val Val Gln Ala Glu Val Ala Pro Gly Leu Gly  
1085 1090 1095

Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro Trp Arg Leu Ser  
1100 1105 1110

Cys Asn Lys Phe Asp Gly Lys Val Ala Thr Leu Ala Phe Ser Asn  
1115 1120 1125

Phe Ser Glu Glu Met Val Val His Asn Ser Gly Pro Ala Asn Gly  
1130 1135 1140

Glu Val Ile Arg Leu Thr Val Asp Tyr Ser Lys Lys Pro Leu Ser  
1145 1150 1155

Val Asp Thr Thr Phe Arg Lys Gln Phe Gly Gln Arg Leu Ala Ala  
1160 1165 1170

Ile Gly Gln Tyr Leu Glu Gln Lys Phe Gly Ser Ala Gln Asp Val  
1175 1180 1185

Glu Gly Cys Leu Val Gly Lys Asp Ile Phe Ile Val Gln Ser Arg  
1190 1195 1200

Pro Gln Pro  
1205

<210> 5

<211> 12

<212> PRT

<213> Oryza sativa, Arabidopsis thaliana, Sorghum bicolor

<400> 5

Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg  
1 5 10

<210> 6

<211> 7

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 6

Ser Arg Arg Val Ala Gly Val  
1 5

&lt;210&gt; 7

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 7

Val Glu Ala Glu Val Ala Pro  
1 5

&lt;210&gt; 8

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 8

His Thr Val Ser Pro Ser Asp His Asp  
1 5

&lt;210&gt; 9

&lt;211&gt; 807

&lt;212&gt; DNA

&lt;213&gt; Hordeum vulgare

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (3)..(590)

&lt;223&gt;

&lt;400&gt; 9

cg gca cga gga gtc ctc ccc aat gtg agc ctc tcg gac cca acc aac  
Ala Arg Gly Val Leu Pro Asn Val Ser Leu Ser Asp Pro Thr Asn

47

1	5	10	15														
ttc	ggg	tct	gca	gta	gct	cg	gtc	tgg	gcc	tcg	ctg	tac	act	cg	agg	95	
Phe	Gly	Ser	Ala	Val	Ala	Arg	Val	Trp	Ala	Ser	Leu	Tyr	Thr	Arg	Arg		
			20					25						30			
gcc	atc	ctc	agc	cg	cg	gt	gt	gct	ggc	gt	cc	cag	agg	gac	ggc	143	
Ala	Ile	Leu	Ser	Arg	Arg	Val	Ala	Gly	Val	Pro	Gln	Arg	Asp	Ala	Lys		
			35					40					45				
atg	gct	gtc	ctg	gt	cg	ag	ag	atg	ctg	gag	cc	gag	ct	tcc	ttc	191	
Met	Ala	Val	Leu	Val	Gln	Glu	Met	Leu	Glu	Pro	Glu	Leu	Ser	Phe	Val		
			50					55				60					
ctc	cac	acg	gtc	agc	cc	tc	cg	gac	cac	gac	ac	agg	gtc	gtc	gag	gct	239
Leu	His	Thr	Val	Ser	Pro	Ser	Asp	His	Asp	Thr	Arg	Val	Val	Gl	Ala		
			65					70			75						
gag	gtt	gcc	ccg	gg	ctg	ggc	gag	acc	ctt	gcc	gct	ggc	acc	cg	ggc	287	
Glu	Val	Ala	Pro	Gly	Leu	Gly	Glu	Thr	Leu	Ala	Ala	Gly	Thr	Arg	Gly		
			80					85			90				95		
acc	ccg	tgg	cg	ctc	tcc	tgc	gac	aag	ttc	gac	acc	gac	gtc	ggc	acc	335	
Thr	Pro	Trp	Arg	Leu	Ser	Cys	Asp	Lys	100	Phe	Asp	Thr	Asp	Val	Ala	Thr	
									105					110			
ctg	gcc	tcc	ggc	aa	tcc	agt	gag	gag	atg	cg	gt	ctc	ggc	tcg	ggc	383	
Leu	Ala	Phe	Ala	Asn	Phe	Ser	Glu	Glu	Met	Arg	Val	Leu	Gly	Ser	Gly		
									115					125			
cc	gg	gac	gg	gag	gt	gt	gg	ctc	act	gt	gac	ta	ag	ac	aa	431	
Pro	Ala	Asp	Gly	Glu	Val	Val	Arg	Leu	Thr	Val	Asp	Tyr	Ser	Thr	Lys		
			130					135				140					
ctg	ctc	tcc	gtc	gac	gg	ac	ttc	agg	cag	aag	ttc	gg	cag	cg	ctg	479	
Leu	Leu	Ser	Val	Asp	Arg	Thr	Phe	Arg	Gln	Lys	Phe	Gly	Gln	Arg	Leu		
								145			150				155		
ggc	ggc	gt	gg	gg	cag	ta	ctg	ga	ca	gg	ttc	gg	ag	gg	gg	527	
Ala	Ala	Ala	Val	Gly	Gln	Tyr	Leu	Glu	Gln	Arg	170	Phe	Gly	Ser	Ala	Gln	Asp
			160												175		
gt	ga	gg	tg	at	gt	tg	ga	ga	at	ta	at	gt	ca	ag	at	575	
Val	Glu	Gly	Cys	Met	Val	Trp	Glu	Asp	Ile	Tyr	Ile	Val	Gln	Ser	Met		
									180			185			190		
cca	caa	ccg	ctg	tag	agtcatccgt	aataatgttt	agatgagcaa	agttttggtt								630	
Pro	Gln	Pro	Leu														
			195														
ggtgaaataa aatttgcga aaatccatg gcaaaataag tcaggtatga agagcccgcc																690	
tgcgaaacca actgattcta aataatgttt tgaattcgtg tttaaattat gggacgtgaa																750	
caatgatttc cttggaatgc atgcattgta agttttaaaa aaaaaaaaaa aaaaaaaaaa																807	
<210> 10																	
<211> 195																	
<212> PRT																	
<213> Hordeum vulgare																	
<400> 10																	

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Ala Arg Gly Val Leu Pro Asn Val Ser Leu Ser Asp Pro Thr Asn Phe  
 1 5 10 15

Gly Ser Ala Val Ala Arg Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala  
 20 25 30

Ile Leu Ser Arg Arg Val Ala Gly Val Pro Gln Arg Asp Ala Lys Met  
 35 40 45

Ala Val Leu Val Gln Glu Met Leu Glu Pro Glu Leu Ser Phe Val Leu  
 50 55 60

His Thr Val Ser Pro Ser Asp His Asp Thr Arg Val Val Glu Ala Glu  
 65 70 75 80

Val Ala Pro Gly Leu Gly Glu Thr Leu Ala Ala Gly Thr Arg Gly Thr  
 85 90 95

Pro Trp Arg Leu Ser Cys Asp Lys Phe Asp Thr Asp Val Ala Thr Leu  
 100 105 110

Ala Phe Ala Asn Phe Ser Glu Glu Met Arg Val Leu Gly Ser Gly Pro  
 115 120 125

Ala Asp Gly Glu Val Val Arg Leu Thr Val Asp Tyr Ser Thr Lys Leu  
 130 135 140

Leu Ser Val Asp Arg Thr Phe Arg Gln Lys Phe Gly Gln Arg Leu Ala  
 145 150 155 160

Ala Val Gly Gln Tyr Leu Glu Gln Arg Phe Gly Ser Ala Gln Asp Val  
 165 170 175

Glu Gly Cys Met Val Trp Glu Asp Ile Tyr Ile Val Gln Ser Met Pro  
 180 185 190

Gln Pro Leu  
 195

<210> 11

<211> 9

<212> PRT

<213> solanum tuberosum

<400> 11

Pro Glu Glu Cys Lys Ala Val Gly Asn  
 1 5

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;210&gt; 12

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 12

Thr Glu Glu Tyr Ser Glu Thr  
1 5

&lt;210&gt; 13

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 13

Arg Phe Val Asn Ala Val Glu  
1 5

&lt;210&gt; 14

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 14

Glu Gly Ser Glu Asp Gly Lys  
1 5

&lt;210&gt; 15

&lt;211&gt; 403

&lt;212&gt; DNA

&lt;213&gt; Solanum tuberosum

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(402)

&lt;223&gt;

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

<210> 16

<211> 134

<212> PRT

<213> Solanum tuberosum

<400> 16

Ala Asp Ala Ser Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile  
1 5 10 15

Gly Leu Glu Asp Tyr Ala Phe Val Leu Leu Ser Arg Phe Val Asn Ala  
20 25 30

Val Glu Ala Leu Gly Gly Ala Asp Trp Leu Ala Glu Asn Val Thr Val  
35 40 45

Lys Asn Ile Ser Ser Trp Asn Asp Pro Ile Gly Ala Leu Thr Val Gly  
50 55 60

Ile Gln Gln Leu Gly Ile Ser Gly Trp Lys Pro Glu Glu Cys Lys Ala  
Seite 25

65 BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
70 75 80

Val Gly Asn Glu Leu Leu Ser Trp Lys Glu Arg Gly Ile Ser Glu Ile  
85 90 95

Glu Gly Ser Glu Asp Gly Lys Thr Ile Trp Ala Leu Arg Leu Lys Ala  
100 105 110

Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu Thr Leu  
115 120 125

Leu Gln Ile Phe Pro Glu  
130

<210> 17

<211> 7

<212> PRT

<213> Sorghum bicolor

<400> 17

Asp Gly Gly His His Arg Pro  
1 5

<210> 18

<211> 8

<212> PRT

<213> Sorghum bicolor

<400> 18

Asp Ala Pro Asp Ser Ala Ile Ala  
1 5

<210> 19

<211> 9

<212> PRT

<213> Sorghum bicolor

<400> 19

Ile Pro Glu Asn Ser Val Arg Thr Tyr  
1 5

<210> 20

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Sorghum bicolor

&lt;400&gt; 20

Val Asn Lys Ala Asp Gly  
1 5

&lt;210&gt; 21

&lt;211&gt; 1526

&lt;212&gt; DNA

&lt;213&gt; Sorghum bicolor

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (2)..(1525)

&lt;223&gt;

&lt;400&gt; 21

g cac gag gct gaa tat gtt cat gat cag agt cac ctg gag gct ctt aca  
His Glu Ala Glu Tyr Val His Asp Gln Ser His Leu Glu Ala Leu Thr  
1 5 10 15

49

tat tct gca ata tat cta aag tgg ata tat act ggt caa ata cca tgc  
Tyr Ser Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Pro Cys  
20 25 30

97

ttt gag gat ggt ggt cac cat cga ccc aat aaa cat gct gag ata tcc  
Phe Glu Asp Gly Gly His His Arg Pro Asn Lys His Ala Glu Ile Ser  
35 40 45

145

agg caa att ttt cgt gaa att gaa agg ata tac tat ggg gaa aac aca  
Arg Gln Ile Phe Arg Glu Ile Glu Arg Ile Tyr Tyr Gly Glu Asn Thr  
50 55 60

193

tca gct cag gat ttg ctt gtg ata cgc aag att cat cct tgt cta cct  
Ser Ala Gln Asp Leu Leu Val Ile Arg Lys Ile His Pro Cys Leu Pro  
65 70 75 80

241

tca ttt aaa tca gaa ttt act gcc tct gtt cct cta aca cga att cgt  
Ser Phe Lys Ser Glu Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg  
85 90 95

289

gat att gct cat cgt aat gac ata cca cat gat ctc aag caa gaa atc  
Asp Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile  
100 105 110

337

aag cat act ata caa aac aag ctt cac cgg aat gcc ggc cct gag gat  
Lys His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp  
115 120 125

385

BCS 04-501-PCT_SEQUENZPROTOKOLL_Verfahren zur Identifizierung.ST25																		
ctt	att	gct	act	gaa	gcc	atg	ctt	gct	agg	att	act	aag	act	cct	gga			433
Leu	Ile	Ala	Thr	Glu	Ala	Met	Leu	Ala	Arg	Ile	Thr	Lys	Thr	Pro	Gly			
130							135					140						
gag	tac	agt	gaa	gct	ttt	gtt	gaa	caa	ttc	aag	acg	ttt	tat	agt	gaa			481
Glu	Tyr	Ser	Glu	Ala	Phe	Val	Glu	Gln	Phe	Lys	Thr	Phe	Tyr	Ser	Glu			
145					150					155					160			
tta	aaa	gat	ttc	ttc	aat	gct	ggc	agc	cta	ctg	gag	caa	gtg	caa	tcc			529
Leu	Lys	Asp	Phe	Phe	Asn	Ala	Gly	Ser	Leu	Leu	Glu	Gln	Val	Gln	Ser			
					165				170					175				
atc	gag	caa	tct	ttg	gat	gag	tct	ggc	tta	gaa	gct	ctc	tca	tcc	ttt			577
Ile	Glu	Gln	Ser	Leu	Asp	Glu	Ser	Gly	Leu	Glu	Ala	Leu	Ser	Ser	Phe			
					180				185					190				
ctg	aaa	acc	aaa	aag	aat	tta	gac	caa	ctg	gaa	gat	gca	aaa	gat	ttg			625
Leu	Lys	Thr	Lys	Lys	Asn	Leu	Asp	Gln	Leu	Glu	Asp	Ala	Lys	Asp	Leu			
					195				200				205					
gat	gaa	aat	ggt	ggc	gtt	caa	gtt	ttg	ttg	aaa	gcc	ttg	ctg	tcg	tta			673
Asp	Glu	Asn	Gly	Gly	Val	Gln	Val	Leu	Leu	Lys	Ala	Leu	Leu	Ser	Leu			
					210				215				220					
tct	tat	cta	aga	tca	att	cta	atg	aag	ggt	ctg	gaa	agt	ggc	ctt	aga			721
Ser	Tyr	Leu	Arg	Ser	Ile	Leu	Met	Lys	Gly	Leu	Glu	Ser	Gly	Leu	Arg			
					225				230				235					
aat	gat	gct	cca	gat	agt	gct	att	gca	atg	cga	caa	aag	tgg	cgt	ctt			769
Asn	Asp	Ala	Pro	Asp	Ser	Ala	Ile	Ala	Met	Arg	Gln	Lys	Trp	Arg	Leu			
					245				250				255					
tgt	gag	atc	ggg	ctt	gaa	gat	tat	tcg	ttt	gta	ttg	tta	agt	aga	tac			817
Cys	Glu	Ile	Gly	Leu	Glu	Asp	Tyr	Ser	Phe	Val	Leu	Leu	Ser	Arg	Tyr			
					260				265				270					
atc	aat	gct	ctt	gaa	gct	ttg	ggt	gga	tca	gct	tca	ctt	gca	gag	ggt			865
Ile	Asn	Ala	Leu	Glu	Ala	Leu	Gly	Gly	Ser	Ala	Ser	Leu	Ala	Gl	Gly			
					275				280				285					
ctt	cct	aca	aat	aca	agt	cta	tgg	gat	gat	gcc	ctt	gat	gcc	ctt	gtc			913
Leu	Pro	Thr	Asn	Thr	Ser	Leu	Trp	Asp	Asp	Ala	Leu	Asp	Ala	Leu	Val			
					290				295				300					
att	ggc	ata	aat	caa	gtt	agc	ttt	tca	gga	tgg	aaa	cca	aat	gag	tgt			961
Ile	Gly	Ile	Asn	Gln	Val	Ser	Phe	Ser	Gly	Trp	Lys	Pro	Asn	Glu	Cys			
					305				310				315					
act	gca	ata	gtg	aat	gag	ctt	ctt	tct	tgg	aag	cag	aaa	ggt	cta	tct			1009
Thr	Ala	Ile	Val	Asn	Glu	Leu	Leu	Ser	Trp	Lys	Gln	Lys	Gly	Leu	Ser			
					325				330				335					
gaa	ttt	gaa	ggc	agt	gag	gat	gga	aag	tat	att	tgg	gca	ctg	aga	ctc			1057
Glu	Phe	Glu	Gly	Ser	Glu	Asp	Gly	Lys	Tyr	Ile	Trp	Ala	Leu	Arg	Leu			
					340				345				350					
aaa	gcc	act	ctt	gat	aga	tca	cga	aga	cta	aca	gaa	gaa	tac	tct	gaa			1105
Lys	Ala	Thr	Leu	Asp	Arg	Ser	Arg	Arg	Leu	Thr	Glu	Glu	Tyr	Ser	Glu			
					355				360				365					
gca	ctt	ctt	tct	ata	ttt	cct	gaa	aaa	gtc	aag	gtt	ctt	ggg	aaa	gcc			1153
Ala	Leu	Leu	Ser	Ile	Phe	Pro	Glu	Lys	Val	Lys	Val	Leu	Gly	Lys	Ala			
					370				375				380					
ctt	gga	ata	cca	gag	aac	agt	gtg	aga	aca	tac	act	gaa	gct	gaa	att			1201
Leu	Gly	Ile	Pro	Glu	Asn	Ser	Val	Arg	Thr	Tyr	Thr	Glu	Ala	Glu	Ile			
					385				390				395					

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
 cgt gct ggt gtt att ttt cac gtc tcg aaa ctt tgc act gta ctt tta 1249  
 Arg Ala Gly Val Ile Phe His Val Ser Lys Leu Cys Thr Val Leu Leu  
 405 410 415

aaa gca act cga gca gtt ctt gga tcg tct gtg tgg gat gtt ctt gtt 1297  
 Lys Ala Thr Arg Ala Val Leu Gly Ser Val Trp Asp Val Leu Val  
 420 425 430

cct gga gtg gcc cat gga gcc ttg ata cag gtt gaa aga ata gct cct 1345  
 Pro Gly Val Ala His Gly Ala Leu Ile Gln Val Glu Arg Ile Ala Pro  
 435 440 445

gga tca ttg cca tca tcc atc aaa gaa cct gtc gtg cta gtt gta aac 1393  
 Gly Ser Leu Pro Ser Ser Ile Lys Glu Pro Val Val Leu Val Val Asn  
 450 455 460

aag gct gat gga gat gaa gag gtc aaa gct gct ggg gat aac ata gtg 1441  
 Lys Ala Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val  
 465 470 475 480

ggt gtt att ctt cta caa gaa tta cct cac cta tca cat ctt ggt gtt 1489  
 Gly Val Ile Leu Leu Gln Glu Leu Pro His Leu Ser His Leu Gly Val  
 485 490 495

aga gct cgt caa gag aaa gtt gta ttt gta act tgc g 1526  
 Arg Ala Arg Gln Glu Lys Val Val Phe Val Thr Cys

&lt;210&gt; 22

&lt;211&gt; 508

&lt;212&gt; PRT

&lt;213&gt; Sorghum bicolor

&lt;400&gt; 22

His Glu Ala Glu Tyr Val His Asp Gln Ser His Leu Glu Ala Leu Thr  
 1 5 10 15

Tyr Ser Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Pro Cys  
 20 25 30

Phe Glu Asp Gly Gly His His Arg Pro Asn Lys His Ala Glu Ile Ser  
 35 40 45

Arg Gln Ile Phe Arg Glu Ile Glu Arg Ile Tyr Tyr Gly Glu Asn Thr  
 50 55 60

Ser Ala Gln Asp Leu Leu Val Ile Arg Lys Ile His Pro Cys Leu Pro  
 65 70 75 80

Ser Phe Lys Ser Glu Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg  
 85 90 95

Asp Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile  
 100 105 110

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Lys His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp  
115 120 125

Leu Ile Ala Thr Glu Ala Met Leu Ala Arg Ile Thr Lys Thr Pro Gly  
130 135 140

Glu Tyr Ser Glu Ala Phe Val Glu Gln Phe Lys Thr Phe Tyr Ser Glu  
145 150 155 160

Leu Lys Asp Phe Phe Asn Ala Gly Ser Leu Leu Glu Gln Val Gln Ser  
165 170 175

Ile Glu Gln Ser Leu Asp Glu Ser Gly Leu Glu Ala Leu Ser Ser Phe  
180 185 190

Leu Lys Thr Lys Lys Asn Leu Asp Gln Leu Glu Asp Ala Lys Asp Leu  
195 200 205

Asp Glu Asn Gly Gly Val Gln Val Leu Leu Lys Ala Leu Leu Ser Leu  
210 215 220

Ser Tyr Leu Arg Ser Ile Leu Met Lys Gly Leu Glu Ser Gly Leu Arg  
225 230 235 240

Asn Asp Ala Pro Asp Ser Ala Ile Ala Met Arg Gln Lys Trp Arg Leu  
245 250 255

Cys Glu Ile Gly Leu Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Tyr  
260 265 270

Ile Asn Ala Leu Glu Ala Leu Gly Gly Ser Ala Ser Leu Ala Glu Gly  
275 280 285

Leu Pro Thr Asn Thr Ser Leu Trp Asp Asp Ala Leu Asp Ala Leu Val  
290 295 300

Ile Gly Ile Asn Gln Val Ser Phe Ser Gly Trp Lys Pro Asn Glu Cys  
305 310 315 320

Thr Ala Ile Val Asn Glu Leu Leu Ser Trp Lys Gln Lys Gly Leu Ser  
325 330 335

Glu Phe Glu Gly Ser Glu Asp Gly Lys Tyr Ile Trp Ala Leu Arg Leu  
340 345 350

Lys Ala Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu  
355 360 365

Ala Leu Leu Ser Ile Phe Pro Glu Lys Val Lys Val Leu Gly Lys Ala  
370 375 380

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Leu Gly Ile Pro Glu Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile  
385 390 395 400

Arg Ala Gly Val Ile Phe His Val Ser Lys Leu Cys Thr Val Leu Leu  
405 410 415

Lys Ala Thr Arg Ala Val Leu Gly Ser Ser Val Trp Asp Val Leu Val  
420 425 430

Pro Gly Val Ala His Gly Ala Leu Ile Gln Val Glu Arg Ile Ala Pro  
435 440 445

Gly Ser Leu Pro Ser Ser Ile Lys Glu Pro Val Val Leu Val Val Asn  
450 455 460

Lys Ala Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val  
465 470 475 480

Gly Val Ile Leu Leu Gln Glu Leu Pro His Leu Ser His Leu Gly Val  
485 490 495

Arg Ala Arg Gln Glu Lys Val Val Phe Val Thr Cys  
500 505

<210> 23

<211> 8

<212> PRT

<213> Triticum aestivum

<400> 23

Arg Asn Asp Ala Thr Asp Ala Gly  
1 5

<210> 24

<211> 8

<212> PRT

<213> Triticum aestivum

<400> 24

Gly Asn Thr Ser Val Trp Asp Asp  
1 5

<210> 25

<211> 509



BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;213&gt; Triticum aestivum

&lt;400&gt; 26

Asn Gly Ala Phe Val Glu Gln Phe Gln Ile Phe Tyr Ser Glu Leu Lys  
1 5 10 15Asp Phe Phe Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys  
20 25 30Glu Ser Leu Asn Asp Ser Gly Leu Glu Ala Leu Ser Ser Phe Val Lys  
35 40 45Thr Lys Gln Ser Leu Asp Gln Val Asp Ala Ala Asn Ile Gln Val Val  
50 55 60Met Lys Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser Val Leu Met Lys  
65 70 75 80Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Thr Asp Ala Gly Ile Ala  
85 90 95Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gly Leu Glu Asp Tyr Ser  
100 105 110Phe Val Leu Leu Ser Arg Tyr Ile Asn Gly Leu Glu Ala Ser Gly Gly  
115 120 125Ser Ala Ser Leu Ala Gln Cys Val Ala Gly Asn Thr Ser Val Trp Asp  
130 135 140Asp Thr Leu Asp Ala Leu Ile Ile Gly Val Asn Gln Val Ser Phe Ser  
145 150 155 160Gly Trp Lys Pro Glu Glu Cys Ile Ala  
165